



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/528,041

02/21/2006

Ryuji Izumoto

Q86960

9021

23373 7590 09/23/2008  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

09/23/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Continuation of 11:** Applicant primarily argues that the manufacturing processes of rubber articles, as taught by Matsuo, is significantly different from manufacturing processes of metal products, as taught by Rathke. Applicant further argues that the metal forming process does not suffer the same problems as the rubber forming process, which creates the need to provide vent holes.

It is agreed that rubber forming processes and metal forming processes have some differences. However, the general concept of forcing a material against a patterned mold or jig is common between the respective processes. In these instances, it is well known that air becomes trapped between the article being formed and the patterned mold surface. As set forth in the previous communication, exhaust holes or vent holes are extensively used in a wide variety of molding or shaping operations in order to remove air trapped between the mold and the article being formed. This statement refers to the general molding/shaping industry. The pending rejection provides one example of a shaping operation (tire industry) in which exhaust holes or vent holes are included for the aforementioned benefits. The particulars of the shaping operation in Matsuo do not teach away from the general use of exhaust holes or vent holes in shaping or molding operations.

It is additionally noted that applicant similarly includes exhaust holes or vent holes in order to remove air trapped between an aluminum tube 54 and the forming surfaces 62 of the metal molds 52A,52B (Paragraph 93). Thus, in a similar manner to the claimed invention, air does become trapped between the metal workpiece and the mold surfaces in the method of Rathke. The fact that the method of Matsuo is not

Art Unit: 1791

directed to a metal forming process does not teach away from the general inclusion of exhaust holes or vent holes between a mold surface and an article being molded to remove entrapped air.

It is emphasized that Matsuo was provided as a single example to demonstrate the known inclusion of exhaust holes or vent holes in shaping/molding operations in order to remove entrapped air. The examiner has previously set forth the previous positions in regards to the inclusion of exhaust holes or vent holes and applicant has not challenged either general position:

***...such a structure is extensively used in a wide variety of molding operations in order to remove air trapped between the mold and the article being formed (Page 2, Last Paragraph)***

***...it is emphasized that exhaust holes or vent holes are conventionally included in molding or shaping operations (Page 7, 1<sup>st</sup> Line).***

In summary, it is recognized that air becomes entrapped between an article being shaped and a mold surface in shaping/molding operations in general and as such, one of ordinary skill in the art at the time of the invention would have been amply motivated to include such a structure in the shaping operation of Rathke.

/Justin R Fischer/

Primary Examiner, Art Unit 1791

September 18, 2008